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**Section II. (Remarks)**

Claims 1-30 previously pending in the application were rejected under 35 USC §102(b) in the November 25, 2005 Office Action. By the present response, claims 1 and 14 have been amended and new claims 31 and 32 have been added to claim specific aspects of the invention. No new matter (35 USC 132) has been introduced.

**Rejection of Claims 1-30 under 35 U.S.C. §102(b), and Traversal Thereof**

In the November 25, 2005 Office Action, the Examiner rejected claims 1-30 under 35 U.S.C. §102(b) as being anticipated by Chen et al. U.S. Patent No. 5,350,336 (hereinafter Chen). Applicants traverse such rejection, and respectfully request consideration of claims 1-32 as amended/added herein, in light of the ensuing remarks.

The legal standard for anticipation is old and well-established:

“Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration.” *W.L. Gore & Assocs. v. Garlock*, 721, F.2d 1540, 220 USPQ 303 at 313 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984).

It is not enough that the prior art reference disclose all the claimed elements in isolation. Rather, “anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim.” *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (emphasis added).

Further, “[u]nder 35 U.S.C. § 102, anticipation requires that ... the prior art reference must be enabling, thus placing the allegedly disclosed matter in the possession of the public.” *Akzo, N.V. v. United States Int’l Trade Comm’n*, 808 F.2d 1471, 1 USPQ2d 1241, 1245 (Fed. Cir. 1986).

Chen et. al. fail to teach or suggest a semiconductor manufacturing process facility “wherein air exhaust is flowed through a discrete volumetric region of said clean room, said discrete volumetric region containing said at least one semiconductor manufacturing tool, whereby heat and other contaminants emanating from said at least one semiconductor manufacturing tool are captured by said air exhaust flow, said facility comprising at least one discharge duct positioned so as to

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provide effective hydrodynamic flow-through of the contaminated air exhaust into the discharge duct and an air exhaust treatment apparatus arranged to (i) receive said contaminated air exhaust from the discharge duct, (ii) produce a treated air exhaust suitable for discharge into the ambient air of the facility, and (iii) recirculate the treated air exhaust to an ambient air environment of the facility,” as required by applicants’ independent apparatus claim 1, and correspondingly recited in applicants’ independent method claim 14 and new independent apparatus claim 31.

In contrast, Chen et. al. teach a semiconductor manufacturing process facility having a large clean room area encompassing essentially all semiconductor process work areas, wherein a plenum exists whereby air flow is forced through the clean room and into a general work area, the lower floor region, where it mixes with ambient air of the facility and is subsequently filtered with a particulate filter and returned to the clean room.

This clean room ambient airflow, however, is distinct from that airflow which passes through and around the semiconductor work area for purposes of capturing chemical contaminants and the like. Specifically, though Chen et. al. fail to provide any substantive detail on its configuration and operation, there are other air flows in and around the semiconductor equipment itself that are intended to remove chemical and other contaminants that may emanate from or be generated by the manufacturing process and related equipment.

This contaminated or toxic airflow is somehow captured by hookup pipe 74, transported to valve stand 70, and then redirected to a scrubber exhaust prior to its discharge to the environment. Indeed, at column 7, lines 13-15, Chen et. al. state that “Exhaust lines and drains must be provided to remove various fumes and gases from the process equipment and from hoods, etc.” The chart towards the bottom of column 7 identifies several of those exhausts and the disposition thereof.

None of them discharges into the facility or otherwise recirculates a treated exhaust.

The confusion lies with Chen et. al. itself, wherein, despite the heading “Description of the Preferred Embodiments,” the first two columns, column 4, line 4, through column 5, line 61, and Figure 1, all describe and represent the prior art, not the Chen et. al. system. In rejecting the applicant’s claims 1-30 on novelty grounds, the Examiner has taken elements from the prior art discussion and from the Chen et. al. system, as if they were one teaching rather than two fundamentally different and distinct teachings. Further, when combining elements of each, the

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Examiner has compounded the error by failing to appreciate and maintain the distinction between the ambient airflow in and through the clean room, and the localized, contaminated air flow, i.e., that airflow that directly impacts on the semiconductor manufacturing tool.

Both of these air flows are clearly identified in the Chen et. al. disclosure, as well as in the prior art. For example, as shown in Fig.1, air is passed through an enclosure 19 containing a tool 12 and collected by exhaust pipe 34 which discharges the contaminated air to header 36 then passes the contaminated air to vertical header 42 and subsequently gas trench 40.

As disclosed in Chen et. al., "[T]he toxic gases from trench 40 are moved into appropriate scrubbers 41 and other purifying equipment (not shown) for cleaning and the resulting highly purified air is exhausted." (column 4, lines 51-54)

Thus, contrary to the applicant's claimed invention, both the prior art and Chen et. al. treat the contaminated air, and discharge the contaminated air into the open atmosphere, not back into the manufacturing facility. It is the mixture of the ambient air passing through the clean room and the facility ambient air that is filtered and recirculated in accordance with Chen et. al., not the air employed to remove chemical contaminants from the work area.

While Chen et. al. do mention the presence of scrubbers, they do so in association with the process for treating the contaminated gaseous stream, not the ambient air of the clean room or the mixture thereof with the facility air. Further, while Chen et. al. also speak of particulate filters and infer the cooling of air being recirculated, this is in reference to the mixed ambient air of the manufacturing facility, not just the clean room air nor, more importantly, the contaminated air passing through and over the manufacturing tools.

In light of (a) the new amendments, which make clear that the air exhaust that is the subject of applicants' invention is that which is contaminated by or potentially contaminated by the semiconductor manufacturing process and/or associated tools and that such air exhaust is treated and recirculated into the general air of the manufacturing facility and (b) the failure of Chen et. al. to teach the treatment and subsequent recirculation of that air exhaust, Chen et. al. cannot and does not anticipate the presently claimed invention. Consequently, Applicants respectfully request that the Examiner reconsider and withdraw the rejection in light of the foregoing discussion.

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**Fees Payable**

One (1) independent and one (1) dependent claim have been added. The addition of the new independent claim increases their number to three (3), and thus no additional independent claim fee is warranted. The number of total claims has been increased to 32 from 30, the largest number previously paid for. Thus, an added claims fee in the amount of \$100 is due at this time.

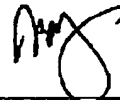
Authorization is hereby given to charge the foregoing \$100, as well as any deficiency in applicable fees for this response to Deposit Account No. 08-3284 of Intellectual Property/Technology Law.

**CONCLUSION**

Claims 1-32 are patentably distinguished over the art and in form and condition for allowance. Favorable action therefore is requested.

If any issues remain, incident to the allowance of the application, the examiner is requested to contact the undersigned attorney at (919) 419-9350 to discuss their resolution, in order that the application can be passed to issue at an early date.

Respectfully submitted,



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